



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

FRIDAY, FEBRUARY 10, 1911

CONTENTS

The American Association for the Advancement of Science:—

The Relations of Isostasy to Geodesy, Geophysics and Geology: DR. JOHN F. HAYFORD 199

The Mershon Expedition to the Charity Islands, Lake Huron: DR. ALEXANDER G. RUTHVEN 208

Artesian Wells of Argentina 209

The Engineering Building of the University of Cincinnati 210

The International School of American Archeology and Ethnology 211

Scientific Notes and News 211

University and Educational News 215

Discussion and Correspondence:—

University Fellowships: PROFESSOR S. N. PATTEN, PRESIDENT DAVID STARR JORDAN.
The Arizona Passenger Pigeons: DR. J. A. ALLEN. *The Transference of Names in Zoology:* W. T. CALMAN 216

Scientific Books:—

Eltringham's African Mimetic Butterflies: PROFESSOR T. D. A. COCKERELL. *Kinnicutt's Sewage Disposal:* DR. GEORGE W. FULLER. *Kneass on the Practice and Theory of the Injector:* PROFESSOR E. M. GOSS 219

Soil Productivity: PROFESSOR T. C. CHAMBERLIN 225

Notes on Meteorology and Climatology: ANDREW H. PALMER 227

Special Articles:—

Cereal Cropping Methods after Soil Sterilization: PROFESSOR H. L. BOLLEY. *Tertiary Deposits of Northeastern Mexico:* E. T. DUMBLE 229

Societies and Academies:—

The American Philosophical Society. The Philosophical Society of Washington: R. L. FARIS 234

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE RELATIONS OF ISOSTASY TO GEODESY, GEOPHYSICS AND GEOLOGY¹

WITHIN the past ten years geodetic observations have furnished positive proof that a close approximation to the condition called isostasy exists in the earth and comparatively near its surface.

Let the depth within which isostasy is found be called the depth of compensation. Think of a prismatic column which has for its base a unit area of the horizontal surface which lies at the depth of compensation, which has for its edges vertical lines, and has for its upper limit the actual irregular surface of the earth (or the sea surface if the upper end of the column is in the ocean). The condition called isostasy is defined by saying that the masses in all such columns are equal.

Fig. 1 (p. 202) represents two such columns. Column *A* is under the land and column *B* is adjacent to it under the ocean. If the condition called isostasy exists in two such columns having equal bases they have equal masses. Note that if this is true the average density in column *A* must be less than the average density in column *B*, for the volume of column *A* is greater than that of column *B*. This may be partially expressed by the statement that each excess of mass represented by material lying above sea level is compensated for by a

¹ Address of retiring vice-president of Section D (Mechanical Science and Engineering) of the American Association for the Advancement of Science, at Minneapolis, December 29, 1910, by John F. Hayford, director, College of Engineering, Northwestern University, Evanston, Ill.